IN THE CLAIMS

The following claim listing replaces all the previous claim listings.

What is claimed is:

1.(original) A bioactive peptide to prevent or treat bacterial infections, said peptide corresponding to the structure of the active sites of amino-terminal extension of subunits assembling surface adhesive organelles of pathogenic Gram-negative bacteria.

2. (original) The peptide according to claim 1, wherein the pathogenic bacterium is selected from the group consisting of *Yersinia* and *Esherichia coli.*

3. (original) The peptide according to claim 1 comprising the amino acid sequence X-Thr-X-Thr-Y-Y, wherein X is any amino acid and Y is a hydrophobic amino acid.

4. (original) The peptide according to claim 3 wherein Y is Leu or Val.

5. (original) A peptide inhibitor against pathogenic *Escherichia coli* strains, the peptide comprising a sequence TXTYTZ, wherein T is Thr, X is selected from the group

consisting of Ala and Gly, Y is selected from the group consisting of Ala, Thr, and Val, and Z is selected from the group consisting of Ile and Val.

6. (original) The bioactive peptide according to claim 1, wherein the peptide prevents binding of equal protein units with each other and is capable of binding with a binding constant of $10^3$ M or higher with a polymerising protein unit.

7. (original) The bioactive peptide according to claim 6, wherein the peptide is effective in preventing self-polymerization of bacterial virulence organelles in a concentration less than $10^{-4}$ M.

8. (original) An antimicrobial peptide inhibiting polymerisation of Dr haemagglutinin, said peptide comprising a sequence selected from the group consisting of GTTGTTKL, TTGTTKL and TTKL.

9. (original) A method to treat bacterial infections by administering to the patient a therapeutically active amount of the bioactive peptide of claim 1.

10. (original) The method according to claim 9, wherein the peptide is further bound to a small molecular or macromolecular substance, thereby increasing the stability of the peptide.

11. (original) The method according to claim 9 wherein the peptide is applied orally, subcutaneously, or injected into blood circulation.

12. (original) The method according to claim 11, wherein the peptide is applied in a concentration between $10^{-4}$ M to $10^{-10}$ M in sera during prevention or treatment of microbial infections.

13.(original) A method for obtaining bioactive peptides according to claim 1, the method comprising the steps of:

a) Cultivating a non pathogenic test microbial strain expressing recombinant self-polymerizing surface organelles of a bacterium;
b) Adding a candidate compound of antibacterial drug into a mixture of the self-polymerising organelles in an appropriate concentration;
c) Investigating degree of polymerisation of the surface organelle; and
d) Judging that the compound has an antivirulence action when the polymerisation is lowered.

14. (original) The method of claim 13, wherein the microbial strain expressing recombinant surface organelles is *Escherichia coli* and the polymerising surface organelle is from *Yersinia*.

15. (original) An inhibitor molecule being effective in:

preventing non-covalent polymerisation of bacterial virulence surface organelles, preventing binding of equal protein units; and

associating with a binding constant of $10^3$ M or higher with the polymerising protein units.

16. (original) The inhibitor molecule according to claim 15, wherein the molecule is a peptide effective in preventing self-polymerization of bacterial virulence surface organelles in a concentration less than $10^{-4}$ M.